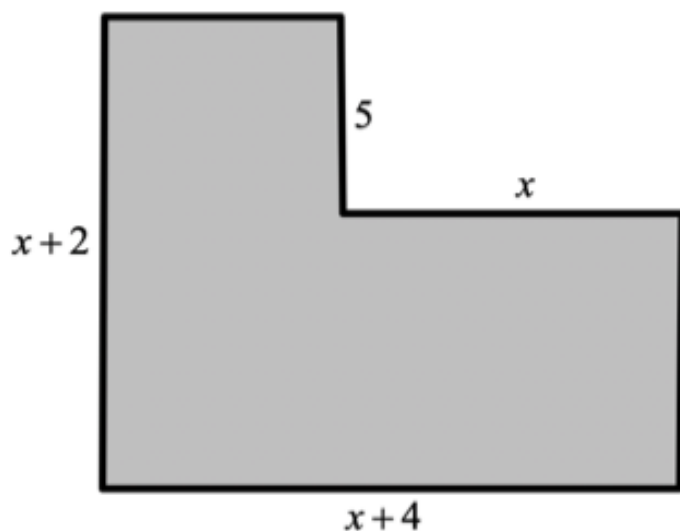


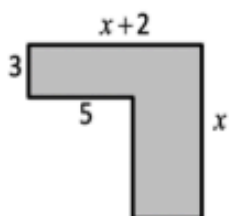
Do now:

**The shape shown has an area of  $80\text{cm}^2$ . What is its perimeter?**

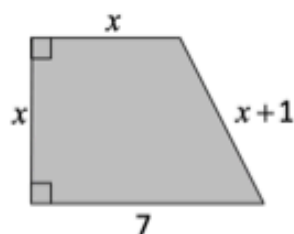


For each question, form and solve a quadratic equation to find the value of  $x$

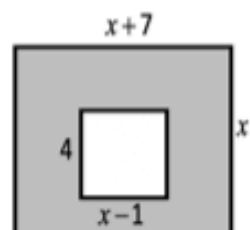
a) Area = 69



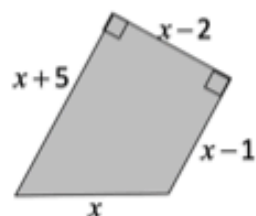
c) Area = 22



b) Area = 92

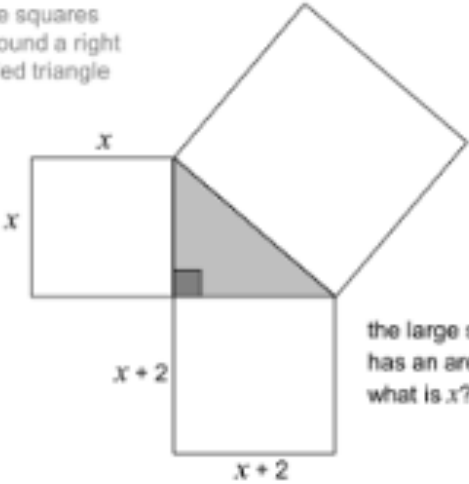


d) Area = 96



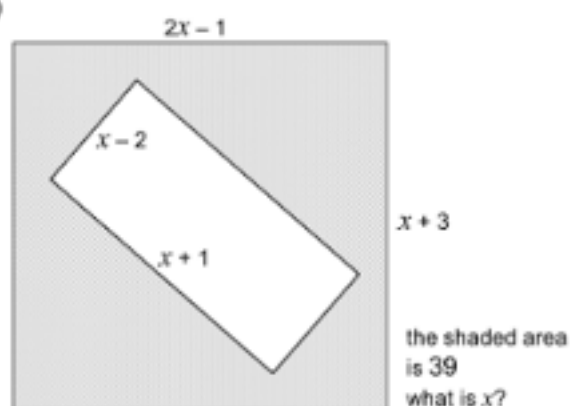
<p>e) I think of two numbers, 4 apart. Their product plus their sum is 44. What are the two numbers?</p>	<p>f) I think of two numbers, 7 apart. The sum of their squares is 137. What are the two numbers?</p>
<p>g) I think of two numbers, 3 apart. The sum of their squares is twelve more than their sum. What are the two numbers?</p>	<p>h) I think of two numbers, 5 apart. Their product is six times their sum. What are the two numbers?</p>

(1) three squares surround a right angled triangle

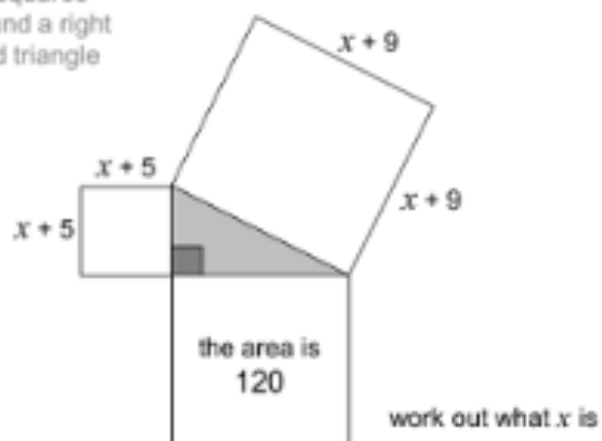


the large square has an area of 34  
what is  $x$ ?

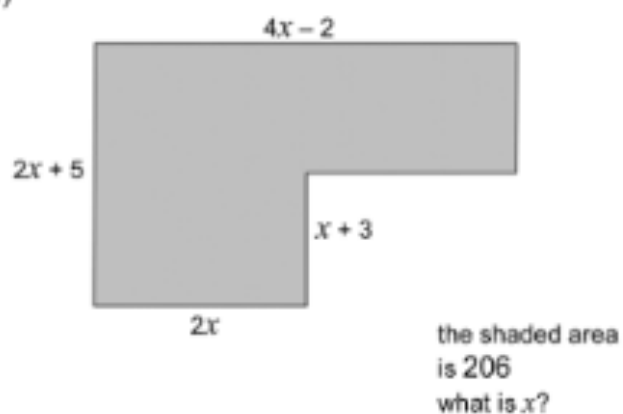
(2)



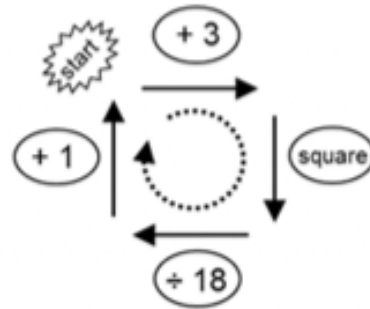
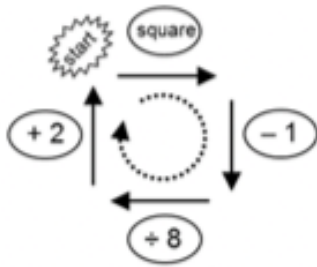
(3) three squares  
surround a right  
angled triangle



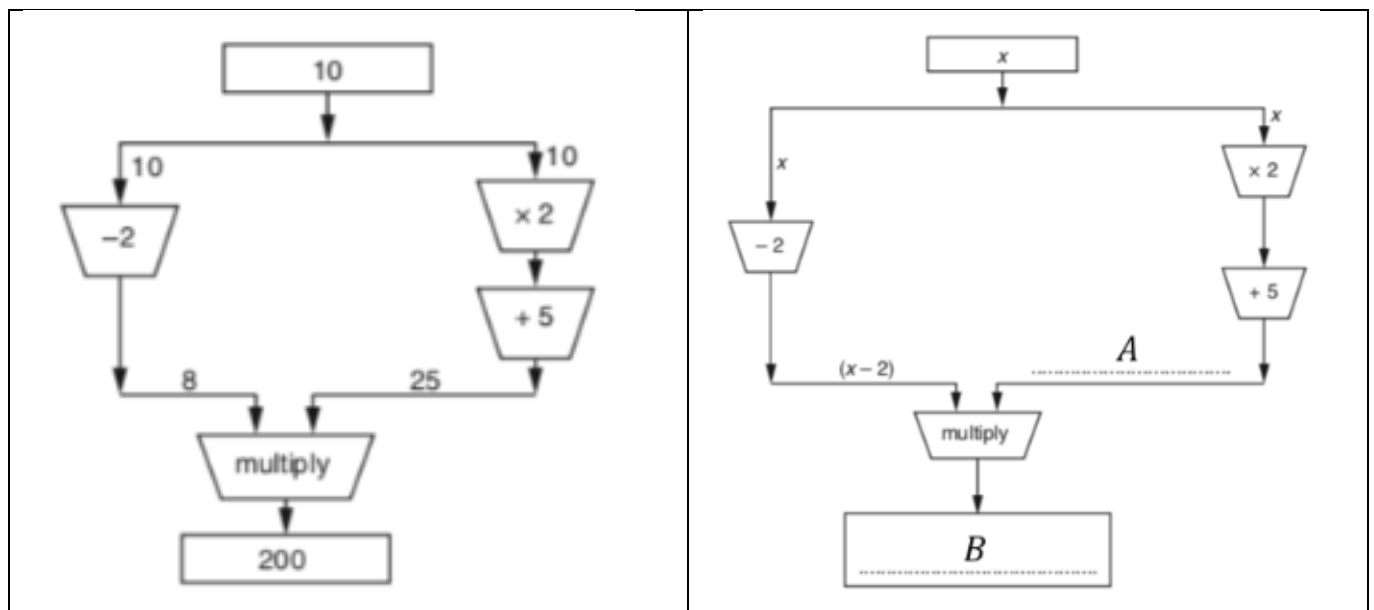
(4)



Can you find the numbers which come out the same as what you start with?



## Challenge II



Which inputs would give an output of 35?